

TRANSMITTAL OF APPEAL BRIEF (Large Entity)Docket No.
1928A1

In Re Application Of: Michael J. Ziegler et al.

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/815,519	April 1, 2004	Niland, Patrick D.	24959	1714	1571

Invention: OLIGOMER SUITABLE FOR COATING COMPOSITIONS FOR WOOD SUBSTRATES

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Dated: December 11, 2007

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/815,519
Applicant : Michael J. Ziegler et al.
Filed : April 1, 2004
Title : OLIGOMER SUITABLE FOR COATING
COMPOSITIONS FOR WOOD SUBSTRATES
Group Art Unit : 1714
Examiner : Niland, Patrick D.

APPEAL BRIEF

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Alexandria, VA 22313-1450

Sir:

Applicants hereby appeal the final rejection in the above-referenced matter as set forth in the Office Action mailed July 13, 2007 (the "Final Office Action"). Applicants submit this Appeal Brief pursuant to 37 C.F.R. § 41.37.

REAL PARTY IN INTEREST

The real party in interest in the present Appeal is PPG Industries Ohio, Inc., the assignee, as evidenced by the Assignment filed at Reel 015946, Frame 0274.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 16, 20-27 and 29-51 stand finally rejected by the Examiner as noted in the Final Office Action. Claims 1-15 and 17-19 are cancelled. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, as noted in the Final Office Action. The rejection of claims 16, 20-27 and 29-51 is appealed.

STATUS OF AMENDMENTS

No amendment was filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to compositions comprising an oligomer. See paragraph [0008] (page 3, lines 1-2). The oligomer comprises a polyol portion comprising a polyol modified with a fatty acid, wherein the polyol comprises a tetrahydric alcohol, a pentahydric alcohol, and/or a hexahydric alcohol. See paragraphs [0010]-[0011] (page 3, line 19 to page 4, line 6). The oligomer also comprises a free radical curable portion. See paragraph [0014] (page 5, lines 7-16). The oligomer is substantially free of any ester linkages formed from the reaction of the polyol portion with a compound having more than one functional group that introduces an ester linkage onto the oligomer. See paragraph [0009] (page 3, lines 5-18). The free radical curable portion is cured by free radical initiation. See paragraph [0027] (page 9, line 27 to page 10, line 15) and paragraphs [0042] to [0044] (page 14, lines 6 to 22).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 16, 20-27, and 29-51 stand rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/47617 ("Van Den Berg").

ARGUMENT

Applicants submit that the Examiner has not, and cannot, establish a *prima facie* case of obviousness with respect to the ground of rejection to be reviewed. Where, as here, the Examiner does not establish a *prime facie* case of obviousness, the applicant need not submit any evidence of nonobviousness in rebuttal, and the case should proceed to allowance. *In re Rijckaert*, 9 F.3d 1531, 1352, 28 USPQ2d 1955 (Fed. Cir. 1993).

The Examiner Has Not Established A Prime Facie Case of Obviousness Of Claims 16, 20-27, and 29-51 over Van Den Berg.

The Examiner asserts that Van Den Berg discloses oligomers falling within the scope of the instant claims. See Final Office Action at 2. The Examiner further asserts that it would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the instantly claimed oligomer from the disclosure of the reference because it is encompassed by the disclosure of Van Den Berg and would have been expected to give a coating having the properties disclosed by Van Den Berg. *Id.* The Examiner further asserts that Van Den Berg discloses using such oligomers in coating substrates including wood which reads on the instantly claimed methods, and curing them oxidatively or with photoinitiators. *Id.*

Applicants respectfully traverse the foregoing rejections. In particular, with respect to the foregoing rejection, Applicants argue the patentability of claims 16, 20-27 and 29-51 as a group.

Contrary to the Examiner's assertion, the present invention is not directed to an oligomer, but, instead, to a composition that comprises an oligomer. See claim 16. The compositions of claim 16, and the claims depending therefrom, are cured by free radical initiation.

Such compositions are neither disclosed nor suggested by Van Den Berg. Rather, in Van Den Berg:

While the ethylenically unsaturated alkyd resin is cured by oxidative drying under the influence of a photo-initiator the vinyl ethers, acetals and/or alkoxysilanes are cured under the influence of an acid and, in the case of acetals and/or alkoxysilanes, also in the presence of a small amount of moisture from the air.

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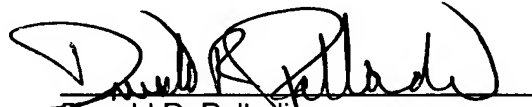
See Van Den Berg at p. 13, lines 14-18. Indeed, the presence of an acid or latent acid and groups reactive therewith is the invention of Van Den Berg. In particular, Van Den Berg states:

The invention consists in that an acid or latent acid and one or more compounds belonging to the group of vinyl ethers, acetals, and alkoxysilanes which are reactive in the presence of an acid are incorporated into a coating composition of the known type mentioned in the opening paragraph.

See Van Den Berg at p. 1, lines 22-26; see *also* claim 1. As a result, a modification of the Van Den Berg disclosure to achieve the claimed invention would destroy the intended function of the Van Den Berg invention. Thus, Van Den Berg neither discloses nor suggests any composition of the type presently claimed in independent claim 16. The remaining claims, claims 20-51, all depend, directly or indirectly, from claim 16.

For all of the foregoing reasons, it is respectfully requested that the case be remanded to the Examiner for issuance of a Notice of Allowance.

Respectfully Submitted,



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CLAIMS APPENDIX

16. A composition comprising an oligomer comprising:
 (a) a polyol portion comprising a polyol modified with a fatty acid, wherein the polyol comprises a tetrahydric alcohol, a pentahydric alcohol, and/or a hexahydric alcohol, and
 (b) a free radical curable portion,
 wherein the oligomer is substantially free of any ester linkages formed from the reaction of the polyol portion with a compound having more than one functional group that introduces an ester linkage onto the oligomer; and
 wherein the free radical curable portion is cured by free radical initiation.
20. The composition of claim 16, wherein the fatty acid comprises a fatty acid moiety derived from one or more drying oils; semi-drying oils; nondrying oils; or mixtures thereof.
21. The composition of claim 20, wherein the fatty acid moiety is derived predominantly from drying oils, semi-drying oils, or mixtures thereof.
22. The composition of claim 20, wherein the fatty acid moiety is derived predominantly from nondrying oils.
23. The composition of claim 21, wherein the drying oil is linseed oil.
24. The composition of claim 21, wherein the semi-drying oil is soya.
25. The composition of claim 22, wherein the nondrying oil is coconut oil.
26. The composition of claim 16, wherein the free radical curable portion contains polymerizable ethylenically unsaturated groups.
27. The composition of claim 26, wherein the polymerizable ethylenically unsaturated groups are acrylate groups, vinyl ether groups or are derived from a compound containing an electron rich carbon-carbon double bond.

29. The composition of claim 26, wherein the free radical curable portion comprises the reaction product of an isocyanate with an ethylenically unsaturated moiety.
30. The composition of claim 29, wherein the reaction product of an isocyanate with an ethylenically unsaturated moiety has a monoisocyanate functionality of at least about 70%.
31. The composition of claim 29, further comprising a non-isocyanate functional compound and a poly-isocyanate functional compounds.
32. The composition of claim 31, wherein the composition has a Mw of 500 to 10,000.
33. The composition of claim 31, wherein the composition has a Mn of 500 to 5000.
34. The composition of claim 31, wherein the composition has a Mw/Mn of 1.0 to 2.0.
35. The composition of claim 34, wherein the composition has a Mw/Mn of 1.1 to 1.5.
36. The composition of claim 16 further comprising an initiator.
37. The composition of claim 36, wherein the initiator is a free radical cure initiator.
38. The composition of claim 36, wherein the initiator is a cationic cure initiator.
39. The composition of claim 36, wherein the oligomer is present in an amount of 20 to 50 weight percent, with weight percent being based on the total weight of the composition.
40. The composition of claim 36, wherein the initiator is present in an amount of 0.1 to 5.0 weight percent, with weight percent being based on the total weight of the composition.
41. The composition of claim 36 further comprising a solvent.

42. The composition of claim 41, wherein the solvent is selected from the group consisting of alkyl acetates, acetone, ketones, monoalcohols, polyalcohols, aromatic hydrocarbons, and mixtures thereof.

43. The composition of claim 41, wherein the solvent is present in an amount of 60 to 80 weight percent, with weight percent being based on the total weight of the composition.

44. The composition of claim 36, wherein the composition is substantially free of solvent.

45. A wooden substrate coated with the composition of claim 36.

46. The substrate of claim 45, wherein the wood is selected from the group consisting of oak and maple.

47. The substrate of claim 45, wherein the substrate is a cabinet or furniture.

48. The composition of claim 36, further comprising one or more compounds that impart nickel scratch resistance to the compound.

49. A method for coating a substrate comprising:

- a) applying the composition of claim 36 to the substrate; and
- b) initiating cure of the free radical curable portion.

50. The method of claim 49, wherein said method further comprises

- c) allowing the composition to oxidatively cure.

51. A method for reducing cycle time in the coating of a substrate comprising wood, comprising applying to the substrate the composition of claim 36 and initiating cure of the free radical curable portion.

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EVIDENCE APPENDIX

[None]

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RELATED PROCEEDINGS APPENDIX

[None]